Appl. No. 09/647,054
Amdt. dated July 18, 2003
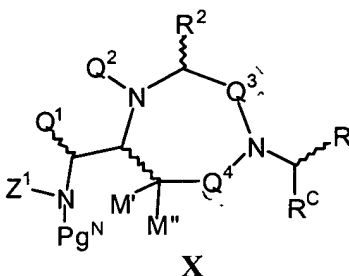Reply to Office Action of February 21, 2003

PATENT

IN THE CLAIMS:

Claim 73 (canceled).

Claim 108 (currently amended): A library of peptide mimetics comprising at least one mimetic from Claim 113.

Claims 74-94 (canceled).

Claim 113 (new): A general mimetic of the structure

X

wherein:

~~~ indicates a bond at a chiral centre of the structure which centre may be in the R or S configuration or a mixture thereof;

R and R^2 is an amino acid side chain group which may be the same or different;

M' and M" may be the same or different and are selected from the group consisting of hydrogen, C_1-C_4 alkyl, chloro and C_1-C_4 alkoxy;

Z' is selected from the group consisting of hydrogen, methyl and part of a cyclic amino acid sidechain joined to Q^1

Pg^N is a protecting group for amine;

R^C is selected from the group consisting of a carboxy terminal part of the mimetic, hydrogen, R, and CH_2R;

Appl. No. 09/647,054
Amdt. dated July 18, 2003
Reply to Office Action of February 21, 2003

PATENT

$Q^1 = R^1$ which has the same definition as R and R^2 above and $Q^2 = Z$ where Z is selected

from the group consisting of hydrogen, methyl, ethyl, formyl and acetyl, $-CH_2R$, and $C(O)R$ or

alternatively Z is part of a cyclic amino acid sidechain group joined to R^2; or Q^1 and Q^2 taken

together represent a cyclic group;

Q^3 is selected from the group consisting of C(O) and CH_2, $-C(O)N(Q^5)CH(R)C(O)-$, -

$C(O)N(Q^5)CH(R) CH_2-$ wherein Q^5 is a covalent bond from the Q^4 group to the nitrogen atom in

Q^3 to form a bicyclic ring system;

Q^4 is selected from the group consisting of CH(M'), C(O), $CH(Q^5)CH_2$ and $CH(Q^5)C(O)$;

with the provisos that when:-

(i) Q^3 is C(O), then $Q^4 = CH(M')$;

(ii) Q^3 is CH_2, then $Q^4 = C(O)$;

(iii) Q^3 is $-C(O)N(Q^5)CH(R)C(O)-$, then $Q^4 = CH(Q^5)CH_2$;

(iv) Q^3 is $-C(O)N(Q^5)CH(R) CH_2-$, then $Q^4 = CH(Q^5)C(O)$;

where Q^5 is a covalent bond from the Q^4 group to the nitrogen atom in Q^3 which

is a cyclization forming a bicyclic ring system.

Claim 114 (new): A peptide mimetic as claimed in claim 113 wherein when Q^1 and Q^2 form a

cyclic group Q^1Q^2 which is selected from the group consisting of $-CH(R)C(O)-$, -

$CH_2CH(R)C(O)-$, $-CH_2CH_2CH(R)C(O)-$, $-CH(R)CH_2-$, $-CH_2CH(R)CH_2-$, $-CH_2CH_2CH(R)CH_2-$,

$-CH_2CH(R)-$, $-CH_2CH_2CH(R)-$, $-CH(R)CH_2CH_2-$, $-CH_2CH(R)CH_2CH_2-$, $-CH(R)CH_2C(O)-$ and

$-CH_2CH(R)CH_2C(O)-$.

Claim 115 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is R, Q^2 is Z, Q^3 is

C(O) or CH_2.

Appl. No. 09/647,054
Amdt. dated July 18, 2003
Reply to Office Action of February 21, 2003

PATENT

Claim 116 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is R, Q^2 is Z, Q^3 is -C(O)N(Q^5)CH(R)C(O)- or -C(O)N(Q^5)CH(R) CH$_2$-.

Claim 117 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is CH(R)C(O)Q^2, Q^1Q^2- forms a cyclic group -CH(R)C(O)-Q^2, Q^3 is C(O) or CH$_2$.

Claim 118 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is CH$_2$CH(R)C(O)Q^2, Q^1Q^2- forms a cyclic group –CH$_2$CH(R)C(O)-, Q^3 is C(O) or CH$_2$.

Claim 119 (new): A peptide mimetic as claimed in Claim 113 wherein R^C is C(O)Pg^C where Pg^C is a protecting group for carboxylic acid.

Claim 120 (new): A peptide mimetic as claimed in Claim 119 wherein Pg^C is selected from the group consisting of alkoxy, benzyloxy, allyloxy, fluorenylmethyloxy amines forming easily removable amides, a cleavable linker to a solid support, the solid support, hydroxy, NHR, OR, R or the remaining C-terminal portion of the mimetic.

Claim 121 (new): A peptide mimetic as claimed in Claim 113 wherein Pg^N is selected from a group consisting of Boc, Cbz, Alloc, trityl, a cleavable linker to a solid support, the solid support, the solid support, hydrogen, R, C(O)R or part of the remaining N-terminal portion of the mimetic.

Claim 122 (new): A peptide mimetic as claimed in Claim 113 wherein M' or M" is methoxy.

Claim 123 (new): A peptide mimetic as claimed in Claim 113 wherein M' or M" is methyl.

Claim 124 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is R^1, Q^2 is hydrogen, Q^3 is C(O), Z^1=H and R^C is C(O)Pg^C .

Appl. No. 09/647,054
Amdt. dated July 18, 2003
Reply to Office Action of February 21, 2003

PATENT

Claim 125 (new): A peptide mimetic as claimed in Claim 124 where R^1 and $R^2 \neq H$.

Claim 126 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is R^1, Q^2 is hydrogen, Q^3 is CH_2, $Z^1 = H$ and R^C is $C(O)Pg^C$.

Claim 127 (new): A peptide mimetic as claimed in Claim 126 where R^1 and $R^2 \neq H$.

Claim 128 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is R^1, Q^2 is hydrogen, Q^3 is $-C(O)N(Q^5)CH(R)C(O)-$, $Z^1 = H$ and R^C is $C(O)Pg^C$.

Claim 129 (new): A peptide mimetic as claimed in Claim 113 wherein Q^1 is R^1, Q^2 is hydrogen, Q^3 is $-C(O)N(Q^5)CH(R)CH_2-$, $Z^1 = H$ and R^C is $C(O)Pg^C$.

Claim 130 (new): A peptide mimetic as claimed in Claim 114 wherein Q^1Q^2 is $-CH(R^2)C(O)-$, Q^3 is $C(O)$, $Z^1 = R^1$ and R^C is $C(O)Pg^C$.

Claim 131 (new): A peptide mimetic as claimed in Claim 114 wherein Q^1Q^2 is $-CH(R^2)C(O)-$, Q^3 is CH_2, $Z^1 = R^1$ and R^C is $C(O)Pg^C$.

Claim 132 (new): A peptide mimetic as claimed in Claim 114 wherein Q^1Q^2 is $-CH_2CH(R^2)C(O)-$, Q^3 is $C(O)$, $Z^1 = R^1$ and R^C is $C(O)Pg^C$.

Claim 133 (new): A peptide mimetic as claimed in Claim 114 wherein Q^1Q^2 is $-CH_2CH(R^2)C(O)-$, Q^3 is CH_2, $Z^1 = R^1$ and R^C is $C(O)Pg^C$.